

Smith (A. H.)

box 11.

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## DESCRIPTION

OF A

*Presented by  
Dr. Sargent.*

# NEW UTERO-VAGINAL SPECULUM,

By ALBERT H. SMITH, M. D.,

Lecturer on Obstetrics in the Philadelphia Lying-in Charity.

The need of a vaginal speculum which would give more extended field of observation, and be applicable to a large range of cases, has probably been felt by every one who has treated diseases of the female reproductive organs, and it is scarcely likely that an instrument, which is perfect in its construction and applicability to all the various requirements of diagnosis and treatment, and which will combine in itself the advantages for all the various forms of specula, will ever be invented.

The valve speculum, either bivalve or quadri-valve, has usually had the preference over the cylindrical, from the facility of introduction, its better retention by the vagina, and its more ready adaptation to various conditions of size and position of the cervix. For some purposes of treatment, especially, the cylindrical must always have an advantage, as in case of application of leeches, or of medicinal solutions, from the action of which the vagina should be protected; in cases in which no portion of the vagina should be exposed.

Two disadvantages, however, attend the valve speculum, and especially the bivalve,

which is now so much in use, since the admirable modification of Cusco, viz., the difficulty of examining in cases attended with great vaginal relaxation, from the tendency of the vaginal walls to encroach upon the field of view, and the impossibility of getting free access to the cervix with instruments and with the finger in cases requiring operative treatment.

To obviate these difficulties a double vaginal retractor is needed; and two instruments have been introduced to the profession with a view to this end, viz: Sims' duck-bill, and the "new expanding" speculum of Mr. Ellis, of London.

In Sims' speculum we have everything we require in such an instrument, by using two separate blades, introduced upon opposite sides of the vagina; but this involves the necessity of an assistant to hold each blade in a separate hand; and inasmuch as the assistant cannot have his eye upon the blade in its whole course, to enable him to hold it in the right direction, the operator must constantly correct the mal-position of the speculum.

Mr. Ellis' speculum, exhibited to the Lon-

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don Obstetrical Society in 1867, and described with the aid of a diagram in their transaction for that year, ingeniously attempted to overcome the difficulties above mentioned, by adapting to the principle of Cusco's speculum, a mechanism by which the blades separated throughout their entire length, with a parallel movement, in addition to having the ordinary angular expansion of the bivalve. This instrument is no doubt familiar to your readers. The mechanism, however, was clumsy and awkward, and probably for this reason the speculum has not come into use. To carry out this same idea, and produce the same movements, an instrument was described by Dr. Hough in the last number of *Hays' Journal*, (July,) but which has nothing new in its action over Ellis'; it is even more complicated and unmanageable in its mechanism. Mr. Kolbe has, however, designed a speculum recently upon the same principle, which is exceedingly neat and simple in construction, fulfilling all the uses of Ellis', and being very much lighter, and more easily managed, seems to me to be really a very admirable instrument—a vast improvement upon the old bivalve or Cusco's.

This speculum, however, having its vulvar aperture a closed ring, does not allow access to the uterus with the finger in operative cases.

About a year ago, before either of the last two mentioned were proposed, I suggested to Mr. Kolbe to make for me a speculum which would combine the double movement of Ellis'—that is, the parallel and angular movement, with the shortness of blade and entire separation at the vulva secured by Sim's; having an advantage over the latter in being self-retaining.

The instrument, as constructed, is light and neat; simple in its mechanism, and easily managed. The blades are three and one-fourth inches in length, and one and three-eighths inches wide. Instead of being connected by a ring at the vulvar end, they are entirely separate; each one moving independently upon its own pivot; the two pivots being fixed upon slides, which move in turn upon a fenestrated bar. These slides are made to fit accurately upon the bar, so that a steady movement in the separation of the blades is secured; this movement is effected by means of a double (or right and left) screw placed under the bar, and passing through nuts in the lower extremities of the pivots upon which the blades rotate. When the instrument is closed, the turn-

ing of this screw by a small milled wheel in the centre separates the slides, causing the center blades to recede in a parallel movement from the centre of the bar; and a contrary turn of the screw will again cause the pivots to approach each other. Thus, the parallel separation of the blade is brought about by the simple turning of a single screw, underneath the instrument, sufficiently out of the way not to interfere with its application nor increase its bulk materially. The angular separation of the blades is made by means of small handles attached, as in the ordinary valvular speculum, and the blades are retained in position by a screw and nut, similar in arrangement to that used in Cusco's, except that each blade, moving upon an independent pivot, requires its own screw adjustment, this being attached to the slide upon which the blade moves in the parallel separation.

FIG. 1. Gives a profile view of the speculum closed for introduction, with the double-screw mechanism for the parallel separation of the blades.

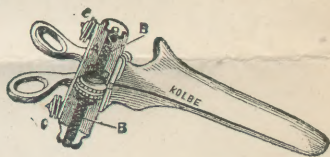


FIG. 2. Shows the instrument from above, after the blades have been separated, in parallelism, without any change in their angle to each other.

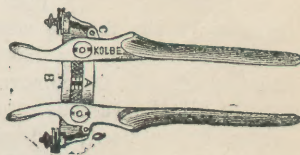
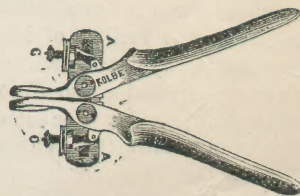


FIG. 3. Shows the instrument with the simple angular separation, used as an ordinary two-valve.



Another view might be shown, but is hardly necessary, with both the parallel and angular movements combined. It is merely needed to say that both movements may be made to the full extent, and the instrument so adapted as



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to produce an equable and uniform distension of the vagina throughout the whole length. It may be introduced with the bar and screw toward the side of the pelvis, the convexity of the blade being antero-posterior; or again with the convexity presenting laterally, the bar being in front of pelvis, a position especially useful in surgical operations upon the cervix, and enables the finger to be carried over the perineum between the separated blades and brought in contact with the cervix.

The shortness of the blades and the full separation anteriorly is proved by experience in the considerable number of cases in which I have used it already, to permit the uterus to fall forward and approach the vulva, making it perfectly accessible; an advantage which every one will appreciate, especially in cases requiring operation, such as the introduction of sponge tents, the ligature or excision of polypi, or any other procedure when the touch would increase the accuracy of operation. Much greater facility is given for the introduc-

tion of the uterine sound, the uterus being more nearly in its natural position, and not forced backward as is the case when the long, closed speculum is used.

The instrument, as gotten up by Mr. Kolbe, is neat, light and portable; the only change in it which can be suggested so far after considerable use, is the substitution of a flat screw head at the end of the double screw, instead of the milled wheel in the middle, as giving a more effective grasp for the parallel separation of the blades.

The peculiarities of this speculum, which, so far as I am aware, are new, are the parallel movement by means of the right and left screw, the entire distinctness of action of the blades by placing them upon separate pivots, moving independently of each other, and the openness of the vulvar extremity upon both sides, differing from all other forms of valve speculum, and affording access to the uterus by the finger, and for examination of all portions of the vaginal tissue.



